Cybex = Avocent XP 4000 Serie

(Formerly the Autoboot Commander 4XP)

Manage PCs, SUNs, MACs, SGIs, HPs and more from 1, 2, 3, 4 or more consoles!

- **Automatic mediation between SUNs, PCs, SGIs, HPs and more**
- **Up to four simultaneous user consoles**
- **Full Multimedia for all attached computers**

From medium sized to the very largest Data Centers - the XP4000 can do it all!

The XP technology is the latest KVM technology available for high-availability high-end systems today. Capable of resolution output at 1600 x 1200 pixels, the Autoboot Commander 4XP provides flicker-free displays for even the most demanding applications, systems and environments.

Mediate dissimilar, complex systems from one console

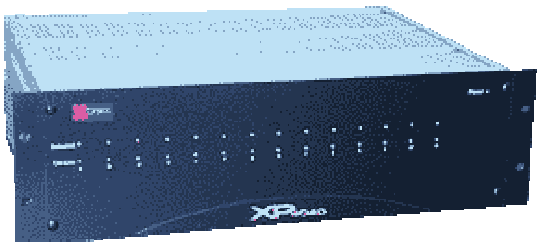
The XP4000's autosensing CPU interface cards make consolidating high-end, different systems a snap. Hook SUNs, PCs, MACs, SGIs and more onto the same switch and use one keyboard, monitor and mouse to access all systems! Change systems attached by merely changing the cable set! No more complex configurations for high-end command centers, just attach the systems to your XP4000! All systems see the keyboard even when not selected!

A Plug-and-Play Solution for your PCs!

The xP4000-series is an external hardware solution that eliminates redundant keyboards, monitors and mice. No software or complicated configuration is required. Its advanced design even permits reconfiguration without powering down the switch or the attached systems. An autosensing power supply automatically

adjusts for international use.

The XP is one of the most configurable KVM switches available today. Mix consoles that are SUNs, MACs and PCs with computers of nearly all types. A basic configuration may include only a few computers and a single console, yet be capable of growing to 3,072 computers with over 1,000 consoles. See Expansion Boards for the XP for some of the exciting options and configuration possibilities.



The XP comes Single-back plane (4040) or Dual-back plane (4080) in Desktop or Rack Mount enclosures

Basic Ordering Information

----SINGLE BACK PLANE CHASSIS' (4040)----	
XP4000 Chassis - Front Access	**List Price**
XP4040D (Desktop) **XP4040R** (Rack Mount)	**$995/$1,045**
XP4000 Chassis - Rear Access*	
XP4040ED (Desktop) **XP4040ER** (Rack Mount)	**$695/$745**
----DUAL BACK PLANE CHASSIS' (4080)----	
XP4000 Chassis - Rear Access*	
XP4080ER (Rack Mount)	**$800**
----XP HUB for LARGE DATA CENTERS----	
XP4400 (Rack Mount)	**$10,000**
CPU Interface Cards and Accessory Cards	
XPAC XPAB XPRB XPAL XPXT/XPXR XPLU/XPDU	**See BOARDS**
Cable Assemblies	

Computer Interface (XPAC/XPAB)	Standard	Multimedia	See CABLES
Univeral PC (AT or PS/2)	CPUC-8	CPUF-8	
PC PS/2	CPICA-8	CPIF-8	
MacIntosh	CPAC-8	CPAF-8	
SUN (13W3 Video)	CWSC-8	CWSF-8	
SUN (VGA Video)			

Local User Interface (XPLU/XPDU)	Standard	Multimedia
PC/AT	CPMU-1	CPMUF-1
PS/2	CPIU-1	CPIUF-1
MacIntosh	CPAU-1	CPAUF-1
SUN	CWSU-1	CWSUF-1

Cybex = Avoncent

Autoboot Commander 4xP Boards

Attaching Consoles (XPDU and XPLU Console Card)

Each console run from an Autoboot Commander 4XP can be an XPDU, Secure Local User Interface Card or XPLU, Local User Interface Card. The XPDU has two distinct advantages over the standard user interface card (XPLU): (1) it contains the Cybex OnScreen Display menuing system; and (2) it has user definable security. XPDUs are supported by all 4xP chassises but it recommended for security that XPDUs only be used in rear access 4xPs (since all xP front access units have an unsecure LPI card for a single console).

Each front access 4XP has 13 slots for Autosensing Computer Interface Cards (XPAC/XPAB), Power Control Boards (XPRB) or Local User Interface Cards (XPDU/XPLU) -- consoles. A front access 4XP comes with a built-in console (LPI card). Rear access 4XPs have 14 slots, at least one of which must be a console (XPDU/XPLU)

Up to four XPDU/XPLU cards can be used in each 4XP. A Local User Console can access any of the systems directly attached to the 4XP or, provided there is an available video path, any downline systems on linked 4XPs (see Interconnecting xP Chassises below)

Autoboot Commander 4XP
XPDU Local User Interface Card
with Security and OnScreen Display

	***XPDU*** ***Secure Local User Interface Card***

An XPDU is the latest technology in console support and features security and OnScreen Display (OSD) Menuing. Pressing the Control Key twice calls up the menu which identifies, by user defined names, all systems connected to the 4XP. The consoles can also be set to automatically lock during a specified period of inactivity, securing system access from unauthorized personnel without operator intervention.

The XPDU, in conjunction with the Autoboot Commander 4XP, offers the highest video resolution available today on a KVM switch, a full 1600 x 1280. This means flicker-free displays, crisp sharp resolution for any system attached to the 4XP.

OSD Menuing also means no more complex hot-key sequences to activate or use the 4XP. Simple selection by name of computers; easy activation of automatic scanning; quick, simple definition of Authorized Operators and passwords; and easy reconfiguration.

Autoboot Commander 4XP
XPLU Local User Interface Card

Each front access 4XP has 13 slots for Autosensing Computer Interface Cards (XPAC/XPAB), Power Control Boards (XPRB) or Local User Interface Cards (XPDU/XPLU) -- consoles. A front access 4XP comes with a built-in console (LPI card). Rear access 4XPs have 14 slots, at least one of which must be a console (XPDU/XPLU)	

Each XPLU card provides a secondary user interface (console). Each 4XP can support up to 4 consoles that can access any attached computer. While two consoles may view the same computer simultaneously, only one console may have an active keyboard to a single attached com0puter. The delay after keyboard usage for another console to take control can be set to as little as 1 second. If 4XP chassis are linked (XPXT/XPXR or XPST/XPSR boards), the consoles may be able to access downline computers, depending on the directional linkage of 4XPs and the number of pathways available and in-use. A special cable set is required for each XPLU or XPDU for connecting a keyboard, monitor and mouse.

XPLU ***Local User Interface Card***	

Autoboot Commander 4XP
XPAC/XPAB Autosensing Computer Interface Card

XPAC
Autosensing CPU
Interface Card

An XPAC card provides the interface from the xP Chassis to a single computer. Each XPAC can be jumpered to handle a type of computer including: PC, SUN, MAC, SGI, HP, RS-6000. The cable specific for the computer is connect to the 44-pin plug on the rear of the XPAC and provides video, keyboard and mouse interfaces, minimally. Some cables also provide serial and multimedia cables. One XPAC or XPAB (see below) is required per computer attached to an Autoboot Commander 4XP. One set of cables is also required per XPAC.

XPAB
Deluxe Autosensing CPU Interface Card
With Reboot Port

An XPAB card provides the interface from the xP Chassis to a computer. As with the XPAC Card, the XPAB can be configured, through jumpers, to handle a specific type of computer. The XPAB, unlike the XPAC provides the ability to *flash upgrade* the chips on the board when a firmware upgrade occurs. The XPAB also provides a single Reboot Port for connecting an RB-3 Power Module (see below) for controlling power to the attached system.

Autoboot Commander 4XP
XPRB/RB3 Power Control

Maximum configuration functionality features consolidate and centralization of systems. A key component of the centralization is Power Control of attached servers through the keyboard. This supports both local power control as well as remote power control when using *KeyView*. To hold costs to a minimum with a maximum of features, the XPRB Boards are configured with XPACs instead of the more per-port-expensive XPAB boards. A single XPRB board can support up to six (6) RB-3 Power Control units, each associated with a specific 4XP channel. The Console Administrator can merely toggle into command mode and type "REBOOT" to physically turn off power of the attached server instead of having to be physically in front of a system. An RJ-11 cable runs from the XPRB Board to the RB3 Module; Wall Power is run to the RB-3 module and from the RB-3 to an attached computer or any device.

	***XPRB*** **Power Control Board**	***RB3*** **Power Module**	

----- INTERCONNECTING *xP* CHASSISES -----

Autoboot Commander xP chassises can be interconnected to provide substantial computer control from many consoles. To interconnect chassises, *xP* transmitter and receiver boards are used to provide "video paths" between chassises. One video path is needed for each console simultaneously accessing another chassis. If there are two video paths to a chassis, there can be two simultaneous consoles accessing the chassis; if a third console attempts to access the chassis, it is "blocked" until a channel is released by one of the accessing consoles. Each *xP* Transmitter Card and each *xP* Receiver Card has two ports. Transmitter and Receiver cards come in a standard version (XPXT and XPXR), requiring a Cybex CLX cable for each path, or a Cat-5 version (XPST and XPSR), requiring three Category-5 cables per path (if multimedia is used; otherwise two cables per path). We recommend the "Snap" (UTP Cat-5) boards for ease of installation and simplified reconfiguration.

Autoboot Commander 4XP
XPXT/XPXR Dual-Port Expansion Cards

The original *xP* chassis interconnect cards are the XPXT (transmitter) and XPXR (receiver) cards. Each card provides two paths which can be used alone or in conjunction. The computers on a chassis are "transmitted" to another chassis via the XPXT card. A chassis "receives" transmitted signals via the XPXR card. Each path provides one console access to computers on a "transmitting" chassis. Tthe topology of the computer center and it's *xP* Chassises determines placement and use of XPXR/XPXT cards. XPXT and XPXR cards must be interconnected using CLX cables for each interconnect path (CLX cables come in lengths of 3', 10', 25', 50', 100', 150', 200' or 250').

STANDARD INTERCONNECT			
	***XPXT*** **xP Transmitter Board** **Dual-Ported**	***XPXR*** **xP Receiver Board** **Dual-Ported**	

Autoboot Commander 4XP
XPST/XPSR SNAP UTP Dual-Port ExpansionCards

The "*snap*" version of the XPXT/XPXR cards operates functionally identical to their counterparts. Interconnection of these boards is instead done with Category-5 cable instead of CLX cables providing flexibility in rewiring a computer center as requirements may change. Two or three sets of Cat-5 cable are required (depending on whether

multimedia [speakers/microphone/serial] are also being accessed) per path. The *XPS* cards are auto-distance sensing.

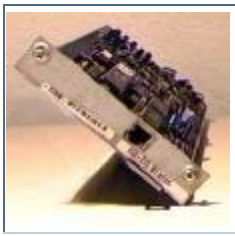
Cat-5 Cable Interconnect			
	***XPST*** **xP Transmitter Board** **Dual-Ported**	***XPSR*** **xP Receiver Board** **Dual-Ported**	

----- CONNECTING EXTENDED COMPUTERS -----

An Autoboot Commander xP chassis can receive KVM (Keyboard, Video, Mouse) signals over Cat-5 cabling using the XPAL card. The XPAL card is a LongView receiver card and can accept the transmissions from an Autoview 200 switch (which has a built-in LongView transmitter port) or from any LongView transmitter.

Autoboot Commander 4XP
XPAL Card

To connect a remote computer or remote computers not on an Autoboot *4xP* Chassis, the XPAL card is a built-in LongView receiver. Now to attach remote computers, up to 500' away, over standard category-5 cable, use the XPAL card in the *4xP* and at the remote location use an Autoview 200 or a LongView Extender.

EXTENDED COMPUTER *xP* CONNECT	
	***XPAL*** **xP LongView Receiver**

Controlling Serial Devices
XPIQ and XPSI Cards

With the new XPIQ and XPSI cards it's possible to access serial devices or computers using your *xP* consoles. To enable serial device access, an *XPIQ* Card is needed for each simultaneous access console (for example, if three consoles are required to have simultaneous serial device access three XPIQ cards are required). An *XPSI* is needed for each four serial devices. A Cat-5 cable is run from the XPSI Card to the serial device and an appropriate Cat-5 connector is attached to the Cat-5 cable and the serial device (we offer a range of connectors for serial devices, call for details). The XPIQ and XPSI Cards do not need to be in the same chassis and additional XPSI Cards can be added as needed.

	***XPIQ*** **xP Terminal Control**	***XPSI*** **xP Serial Interface**	

Basic Ordering Information

XP Boards	List*
XPAC Autosensing CPU Interface Card	$195
XPAB Deluxe Autosensing CPU Interface Card	$495
XPLU Secondary User Interface Card	$400
XPDU Secure Secondary User Interface Card	$600
XPRB ReBoot Power Board, 6 Ports	$495
RB-3 Power Module	$120
XPAL LongView Receiver Card	$400
XPXT Transmitting Expansion Card, Dual Port	$250
XPXR Receiving Expansion Card, Dual Port	$250
XPST Snap Transmitting Expansion Card, 2-Ports	$400
XPSR Snap Receiving Expansion Card, 2-Ports	$400
XPIQ Terminal Control Module	$1,195
XPSI Serial Interface Module (4-Ports)	$395